INTRODUCTION TO ELECTRONIC BUSINESS WITH THE DEPARTMENT OF DEFENSE

A HANDBOOK FOR BUSINESS

The Department of Defense (DoD) and Defense eBusiness welcome your interest in Electronic Business (eB). This handbook will help you gain a better understanding of electronic business and learn about some of the tools, technologies, and techniques specific to eB and how they can be used to do business with DoD.

Should you have any questions after you have read this handbook, please email us at DoDBizWeb@hq.dla.mil.

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Chapter One – Introduction to Electronic Business

Introduction

This chapter introduces the concept of Electronic Business (eB) and describes some of the electronic tools and technologies available to businesses to enhance every aspect of buying and selling goods and services in a global electronic marketplace. The electronic exchange of money and information has been a familiar and common practice in the business world for decades, starting with the simple credit card. Since then, technology has become a familiar part of our everyday lives in things such as cell phones and satellite television, cars that provide us with driving directions and the self-scan grocery store checkout lane. Conducting business with the help of electronic technologies is nothing new. What *is* new is the emergence of technologies that are becoming more affordable, easy-to-use, and widely accepted by small businesses – technologies that move money, products, and information faster and more efficiently than ever before.

The term "electronic business" is defined simply as conducting business on-line. EB refers to all forms of individual and organizational commercial transactions based on the processing and transmission of digitized data including text, sound, and visual images. One of the most familiar and powerful manifestations of the eB phenomenon is the Internet. Although Internet-based eB techniques may be a viable way to improve the exchange of information, the greater power of eB is its potential to fundamentally change and improve business processes and models.

In addition to the expanded marketing and sales opportunities that eB affords, companies are realizing other direct and indirect benefits such as improved customer service; improved data accuracy; increased financial control; reduced labor processing costs; and decreased administrative costs. Small businesses can now obtain relevant market data, accurate and current statistics, and immediate feedback from suppliers and customers with a speed and efficiency once reserved for large companies.

The Big Electronic Picture

The Internet and the World Wide Web

The broad and increasing acceptance of eB techniques is largely a result of the explosive growth of the Internet and the use of the World Wide Web (the "Web"), a system that facilitates the "browsing" and retrieval of information over the

Internet. The Internet was originally conceived as a small group of interconnected computers intended as an inexpensive and reliable means of communication and data exchange among governmental organizations and educational institutions. Today, the Internet is a global network of computers communicating in a common language via telephone, fiber optic, cable, microwave, or satellite connections. It has no centralized distribution point.

The Internet's complex structure, non-regulated nature, speed, and interconnectivity allow it to support the World Wide Web and a multitude of online discussion groups, bulletin boards, and chat rooms. This global electronic infrastructure is increasing in size and complexity at an incredible rate and is reaching into every corner of the world.

The Global Information Infrastructure

The Global Information Infrastructure (GII) refers to the worldwide system of high-speed communications networks, computers, databanks, and consumer electronics that make vast amounts of information available to users. The GII encompasses a wide range of equipment, including cameras, scanners, keyboards, facsimile machines, telephones, computers, switches, compact disks, video and audio tape, cable, wire, satellites, fiber-optic transmission lines, speakers, networks of all types, televisions, monitors, printers, and much more. Combine the GII with the enormous amount of electronic information to which it has access (e.g., documents, files, faxes, graphics, text, audio, video, animations, e-mail, news), and you have what is loosely referred to as the "Information Superhighway". The Internet is fulfilling the vision of the Information Superhighway as it reaches into every community to connect computers, people, and information.

EC Tools and Techniques

Maintaining competitiveness through the use of electronic technologies is not really a new idea. Most small businesses are familiar with the usefulness and necessity of fax machines, computers, e-mail, and Internet access. However, today's vision of electronic business requires small businesses to consider:

a) adopting eB technologies previously available only to large corporations
b) using the Internet to market and sell goods and services to customers
c) learning ways to make the more familiar technologies work harder and smarter; and
d) fundamentally rethinking the way they want to do business.

Here are some of the technologies, tools, and techniques that can help companies compete and succeed in an electronic marketplace.

Electronic Mail

Electronic Mail is one of the fastest growing forms of interpersonal communication today. It is one of the most frequently used applications on the Internet. E-mail technology allows a computer user to transmit messages to, and receive messages from, another computer user. The other user may be an employee of the same business on the same computer network, or a person in a remote location connected by a telecommunications link. Every e-mail user has his own unique e-mail "address", usually consisting of his "user name" followed by the "@" symbol and the name of the host computer where the user's e-mail will be received, for example: jsmith@anybusiness.com. The host computer acts as a mailbox and accumulates e-mail messages until the recipient retrieves them. Any person or business can readily obtain e-mail capability from an Internet Service Provider (ISP). Some service providers require the user to install a special e-mail software application, which may sometimes be free or packaged with computer operating systems.

E-mail has become an indispensable tool in today's business environment. Business enterprises account for an estimated 80% of all e-mail accounts. E-mail software programs enable the creation of distribution lists that allow a single e-mail message to be delivered simultaneously to multiple recipients. This capability makes e-mail a powerful marketing tool. E-mail capability is available at a fraction of the cost of traditional direct mail methods.

Rather than obtaining e-mail services from an ISP, another option is for a user with access to the Internet to choose from a number of free Web-based e-mail services, e.g., www.hotmail.com; www.yahoo.com. With this method, the user must visit a particular website before he can send or retrieve e-mail. Free web-based services may not be able to offer the scope of customized business services and the degree of security that a local ISP can provide, so a company must choose its e-mail services carefully.

Instant Messaging (IM)

Instant messaging is a Web-based technology that alerts the user when someone on his private list is online. The user can then correspond online with that person in real time. IM is growing faster than electronic mail. PCWorld.com estimates that more than 1 billion instant messages are sent over the Internet each day. AOL delivers 600 million instant messages each day compared to 110 million emails, according to zdnet.com.

In addition to its popularity for personal use, IM is now being used by businesses that are trying to balance the benefits of instantaneous communications with concerns over security. Insecure IM systems, the lack of a way to monitor the type and content of information being exchanged, the likelihood that a hacker can intercept any exchange of information, are very worrisome for businesses.

The next generation of IM systems offers features such as conferencing, file sharing and transfer, and encryption.

More information is available at these sites:

http://www.instantmessagingplanet.com

IM, I Said (How Instant Messaging Can Boost Your Business)
http://www.zdnet.com/anchordesk/story/story_4465.html

10 Tips for Using Instant Messaging for Business
http://www.bcentral.com/articles/enbysk/135.asp

Instant Messaging Gets Down to Business
http://www.pcworld.com/news/article.asp?aid=16963

Electronic Data Interchange

Electronic Data Interchange (EDI) is the computer-to-computer exchange of business information using a specified format. To make use of EDI, two or more companies enter into a formal "trading partner" agreement to exchange data. The exchanges occur in accordance with industry-specific data formatting protocols, called "transaction sets", agreed upon by the trading partners.

Although today there are many syntaxes for EDI, only two are widely recognized: ANSI ASC X12 and the Electronic Data Interchange for Administration, Commerce, and Transport (EDIFACT). Implementation of EDI systems within the Federal Government is not mandated, however, when Federal departments or agencies do implement EDI systems, use of the ANSI ASC X12 and EDIFACT families of standards with specified constraints is required. More information on the Federal Standards for EDI may be found in Federal Information Processing Standards (FIPS) Publication 161-2 at http://www.itl.nist.gov/fipspubs/fip161-2.htm

Electronic Funds Transfer

Electronic Funds Transfer (EFT) is an EDI transaction that is already familiar to many. It is the electronic collection of purchaser payments and remittances, as opposed to the submittal of paper invoices and receipt of paper checks. EFT offers a fast, reliable, and secure way for businesses to receive payment from customers. The Debt Collection Improvement Act of 1996 requires payments on all Federal contracts to be made via EFT if the solicitation was issued after June 26, 1996.

EFT is the mechanism behind funds transfer conveniences such as direct payroll deposit, automated teller machines, point-of-sale debit card transactions, and credit card transactions. Many people are familiar with the automatic payment which is debited from their bank account or credit card when they sign up for an AOL account or join a health club.

Facsimile Technology

Facsimile (fax) technology encodes and transmits a signal representing an "image" of a document (rather than the digital form of the document itself) over a telephone connection. The imaged document can have any visual content, including text, graphics, handwriting, or photos. Facsimile options include the traditional "fax machine", which automatically prints the received image on paper, or the "fax modem", an integral part of a desktop computer. Using specialized software, a fax modem can encode and transmit an image of a document without having to scan the document itself. A fax modem can also encode and transmit an image of the digitized file created by a scanner. Images encoded and transmitted by a fax machine or fax modem image can be viewed on-screen or printed by the recipient. However, a facsimile image cannot be edited since it is just a "picture" of the text. A facsimile transmission can be delivered to multiple recipients simultaneously.

Purchase Cards

Purchase cards are the federal government's version of the traditional credit card. The federal government must use purchase cards for all purchases valued at less than $2,500 (micropurchases). Purchase cards allow the vendor to receive payment from the government more quickly than with traditional paper-based billing and payment methods. The purchase card is convenient for its holder, because, like a credit card, it requires only one monthly payment to a single banking institution, thereby reducing the paperwork involved in paying multiple vendors. In addition, the purchaser can take possession of goods and services without waiting for a check to clear. More information on federal government purchase cards is available at http://pub.fss.gsa.gov/services/gsa-smartpay/ and on DoD purchase cards at http://purchasecard.saalt.army.mil/

Smart Cards

Smart cards are plastic cards similar in size and appearance to credit cards that are embedded with a small programmable microchip and memory that can store and process information. When inserted into a card reader, the smart card transfers data to and from applications. Smart cards are used for personal identification, security, financial services, health care, transportation, digital cash, and other uses. A single card can access different hardware systems such as card readers, bar code readers, and automatic teller machines (ATMs). For

more information on how the government is using smart cards, visit http://www.estrategy.gov/smartgov/smart_card.cfm.

Debit Cards

A debit card resembles a plastic credit card with a magnetic strip. When it is used to make a purchase, the purchaser's checking account is automatically debited. The cash is immediately transferred to the merchant's business account. A debit card is usually machine readable, allowing for electronic payment through the activation of an automated teller machine (ATM) or other automated payment device or "card reader" when used in conjunction with a 4-digit personal identification number (PIN).

Debit cards have become one of the most popular methods of payment. Almost anyone who has a checking account has a debit card. Debit cards are a fast and safe payment alternative for customers and merchants alike. Accepting debit card payment from customers in the store or over the Internet can increase a company's sales volume, lower handling costs associated with other payment methods, and provide an edge over competitors who do not accept debit card payment.

Online Retailing

The average consumer is becoming more comfortable with the idea of transmitting personal information, such as credit card numbers, over the Internet. Consequently, the number of online shoppers is skyrocketing. The cost for a small business to establish an online retail presence has decreased significantly. In the virtual world of the Web, small businesses now have the opportunity to successfully compete with large businesses. In addition to using the Internet to make online purchases, visitors to a retail website may prefer to do some preliminary online shopping in preparation to a visit to the company's "brick and mortar" site.

Electronic Catalogs and Malls

A catalog can be defined as "a description of items arranged systematically with visual details". When item information is listed in an electronic medium, i.e., on a compact disk (CD) or on a web page, it becomes an electronic catalog. Immediate cost savings are realized because electronic catalogs do not have to be printed and shipped to customers. The shipping of an electronic catalog in CD format can be very cost-effective when compared to the publication and distribution of a larger and heaver paper catalog. However, posting catalogs on the Internet brings even greater benefits. All current and prospective customers can access the catalog immediately from their home or office, and product/pricing information can be updated instantly. It is important to note that many purchasers and contracting agencies today will order only those goods and

services cataloged in an electronic format. Government buyers can browse electronic catalogs for products and services, compare prices, place orders, and make payments using Federal government purchase cards. Electronic catalogs (ECATs) help reduce order cycle time and the resources that Government buyers need to make purchases.

Here are some examples of electronic catalogs used by the Federal Government:

The Air Force Country Store	http://www.hanscom.af.mil/CSTORE/
Defense Supply Center Philadelphia (DSCP)	http://www.dscp.dla.mil/
Defense Supply Center Richmond (DSCR)	http://www.dscr.dla.mil
Defense Supply Center Columbus (DSCC)	http://www.dscc.dla.mil
Defense Reutilization and Marketing Service (DRMS)	http://www.drms.dla.mil
GSA Advantage!	http://www.gsaadvantage.gov
NASA Government-Wide Massbuy Contracts Homepage	http://genesis.gsfc.nasa.gov/nasa/adpmass.htm
National Industries for the Blind	http://www.jwod.com
Naval Inventory Control Point (NAVICP)	http://www.navicp.navy.mil
Navy's Electronic Commerce On-line (NECO)	http://www.neco.navy.mil
Navy's Information Technology Electronic Catalog (ITEC) Direct	http://itec-direct.navy.mil
Office of Federal Procurement Policy (OFPP) ARNet	http://www.arnet.gov/

An electronic mall (EMALL) is a website organized in the tradition of a shopping mall, where a shopper can browse through a selection of online "stores" in search of desired products and services. EMALLS offer shoppers easy access to supplier information, including the ability to search one or more online catalogs for specific information about products, features, and prices.

An example of an electronic mall is the Department of Defense Electronic Mall (DoD EMALL), a single point of entry for the government shopper to search, find, compare, and order goods and services, as well as to check the status of an order. The DoD EMALL can be found at http://www.emall.dla.mil/

EMALL architecture may be completely centralized, with all information stored on a central database maintained by the “manager” of the EMALL. However, the current trend is toward a “distributed” architecture where vendor information and electronic catalogs, though presented as though they all reside in a central location, are physically located on different computer databases maintained by the vendors.

EMALLS are increasing in popularity among shoppers because they are easy to use and enable quick comparisons among a host of different product features and prices from different vendors. They generally offer very competitive pricing and online payment options.

Bar Coding

A bar code is a pattern of colored lines of various width separated by white spaces, also of varying width. The pattern is read with a special optical scanner that can transfer the information contained in the bar code to a computer. The most common type of bar code used in the business sector is the Universal Product Code (UPC), present on most general merchandise. Bar coding allows individual items to be uniquely identified, accurately tracked, and automatically inventoried. Bar coding is fast becoming a requirement for the delivery of merchandise to many purchasers, including governments and military installations. Bar coding is also being used in other areas that require high speed or that deal with large inventories. For businesses, bar code systems can save time, increase productivity, improve product quality, reduce paper documentation, improve reporting accuracy, and minimize inventory overhead. Bar coding also provides a secure, digital recordkeeping system that tracks and stores information about products and processes, and can be easily accessed and transmitted electronically.

Chapter Two – The Internet and the World Wide Web

Background

The Internet came into existence in the 1960s as part of a Department of Defense initiative to develop a way to transmit, via a telephone connection between two computers, large amounts of data between various governmental agencies and academic institutions. The Internet has since grown into a vast global network of electronic components that includes thousands of smaller computer networks and millions of computers. Each computer on this "network of networks" is connected to every other (theoretically) via a system of telephone lines and other electronic data transmission methods. All of these computers are able to speak a similar electronic language to each other, and thus, can exchange large amounts of information easily, accurately, and extremely quickly.

The World Wide Web or "Web" is the common term for a graphical, interactive information exchange system supported by the electronic framework of the Internet. The Web allows users, using Web browser software, to search for, access, display, and download a worldwide collection of textual, graphical, audio and video files residing on servers. A server is a computer system that stores, retrieves, and transfers ("serves") a variety of files, data and services when requested by another computer system (the "client"). (A Web browser application such as Netscape would be a type of client). The documents, commonly formatted using hypertext markup language (HTML), are read and displayed on-screen by the user's Web browser program.

Important Terms

Uniform Resource Locator (URL)

A uniform resource locator (URL) is the standard way an Internet resource is identified so that it can be located and requested by a Web browser. The URL specifies the communications protocol to be used to access the resource (http, ftp, telnet), the name of the server on which the resource resides (closely related to the "domain name" defined below), and the path or file name of the specific resource stored on the server. When no path or file name is specified in a URL, the server usually allows automatic access to a default or index file. This is how most "home pages" are called up by a Web browser after entering a domain name. Http refers to hypertext transfer protocol: a communication standard used by the Web to transfer HTML documents and related information for viewing rather than copying. FTP, file transfer protocol, is a protocol used for copying files to and from a remote computer ("uploading" and "downloading"). In

xtensible MarkUp Language (XML)

XML is a simple, flexible, robust, nonproprietary language derived from Standard Generalized Markup Language (SGML). XML is intended to make it easy to create structured documents and easy to describe, deliver and exchange structured data between applications. XML is designed to improve the functionality of the web, however it is not just for web pages. It is playing an increasingly important role in the transmission and sharing of data on the web and elsewhere. With XML, data can be exchanged between computer systems which would otherwise be incompatible.

There are many web resources for information and tutorials on XML. Here are a few: www.w3c.org; www.xml.com; www.ucc.ie/xml. For a quick overview of

XML, visit http://www.xmlbooks.com/press/nongeeky.htm. For information on how the government is using XML, go to http://www.xml.gov.

Accessing the Internet

There are several different ways to get connected to the Internet. The type of connections available to the user depends on access to telephone and/or cable television lines, the desired data transmission speed, and budget. The table on the next page shows a comparison of the choices.

Internet Connection Options

Category	Connection Type	Pros	Cons
Telephone (Dial-up)	Telephone	• Inexpensive • Easy set-up • No additional equipment • Most ISP plans provide unlimited access.	• Slow (Avg: 56Kbps) • Unreliable connections • Only connects one user
ISDN	ISDN	• Proven technology • Widely available • Use phone and Internet at the same time • Multi-user capability	• Relatively Slow (Avg: 64Kbps – 256Kbps) • Additional set up and equipment costs • Most ISP plans charge by usage.
Broadband	Cable	• Ultra fast connections (Avg: 500Kbps – 1Mbps) • Unlimited access time • Does not require a telephone line • Multi-user capability	• Need to have cable TV availability • Cable company needs to offer service • Shared bandwidth means possible slow downs. • Always-on connection raises possible security concerns
	DSL/ADSL (Digital Subscriber Line / Asymmetric Digital Subscriber Line)	• Ultra fast connections (Avg: 256Kbps – 1.5Mbps) • Unlimited access time • Use phone and Internet at the same time • Multi-user capability.	• Additional set up and equipment costs • Not widely available outside of metro areas • Always-on connection raises possible security concerns
	Fixed Wireless (Wireless connection to transmitter station)	• Ultra fast connections (Avg: 256Kbps – 2Mbps) • Unlimited access time • Does not require a cable or telephone line • Multi-user capability	• Additional set up and equipment costs • Not widely available outside of metro areas • Shared bandwidth means possible slow downs. • Always-on connection raises possible security concerns • Weather and obstructed line of sight may affect performance
	Satellite (Wireless connection directly to satellite)	• Connections at 400Kbs and higher • Unlimited access time • Does not require a cable or telephone line • Multi-user capability • Available everywhere	• Additional set up and equipment costs • Shared bandwidth means possible slow downs. • Weather and obstructed line of sight may affect performance • Excessive latency

The Browser

Browsers are tools that help users access and navigate the Web. The graphical user interface that allows users to view and interact with HTML documents residing on the Internet is provided by browser software. The browser, such as Netscape or Microsoft Internet Explorer, can retrieve and display Web pages when the user types in a specific URL or clicks on a Web page hyperlink. A browser can search for Web sites containing certain key words and keep track of sites that have been visited so they can be quickly accessed later. In addition to accessing Web sites, a browser can allow the printing and storage of entire Web pages, send and receive electronic mail, and customize the way Web documents are viewed and managed.

Cookies

A cookie is a piece of information sent to and stored on a user's browser when a particular Web site is visited. The browser stores the cookie and sends it back to the web server each time the user requests that same site again. Cookies can identify users and store information about preferences so that the web server can customize web pages for you. This information enables the web server to show you a page that welcomes you by name and includes content that you are likely to find relevant.

Plug-Ins

Plug-ins are small software programs that "plug-in" and expand the features of primary software applications. They can also add multimedia capabilities to a Web browser.

Cache and Temp Files

When using popular Web browser programs, copies of visited Web sites are stored by the browser in a special file folder on the computer. Having these files handy means that as Web sites are navigated and the same Web page is visited again and again, the browser will load the copy of the stored file rather than requesting it from the remote Web server each time. However, cache or temp file folders can fill with many hundreds of files and slow down the computer's speed. For this reason, all files in the cache or temp folders should be deleted periodically.

Searching for Information on the Internet

Search Engines

A search engine is a computer application residing on a remote server and accessed by the user through a Web site. A search engine can be instructed to search the World Wide Web and identify/retrieve information and URLs in response to a set of user-specified search criteria, or "query". Search engines build, manage, and routinely update massive databases and/or directories of URLs, including brief descriptions, for a variety of Internet-based information, including Web sites, newsgroups, and archives. Thus, when the user executes a search, he is not really searching the Web in real time, but is searching a constantly updated database or directory of URLs maintained by the search engine. Search engines generally update and add to their databases through the use of a simple program called a "spider" that constantly scans the Web, crawling from link to link in search of new sites and new information.

A search engine generally organizes the information in its database into a hierarchy of categories and subjects beginning with general headings broken down into increasingly specific subheadings. Information is also indexed based on common keywords. In response to the user's search query, the search engine identifies Web sites containing similar subject matter and/or matching keywords and usually ranks them in order of how closely they match. Depending on the search criteria specified by the user, a search engine can identify many thousands of matching sites or "hits" or may find only a few. Some "multiengine" search engines search the databases of several other search engines at the same time. Using a search engine to find only the desired information while excluding unwanted information takes practice. For links to a variety of search engines, directories, and related sites to help locate people, places, and information on the Web, visit www.hotsheet.com or www.freeality.com.

Search Methods

Search engines are becoming increasingly similar in the features they offer and in the way they search for information. Many search engines are now referred to as "portals", which are collections of links, content, and services designed to guide users to information they are likely to find interesting – news, weather, entertainment, commerce sites, chat rooms, and so on. However, there are some differences among search engines that dictate the way a query should be executed. Most search engines provide online guidance to help users formulate queries and locate information. Some of the more common search methods and query techniques are discussed below.

- **Keyword Queries** – the simplest and most common search method. The search engine will compare the keyword(s) against its keyword

indices and return sites that contain the keyword, and sometimes variations on the keyword. The returned list is generally ranked based on keyword(s) frequency in the content.

- **Conceptual Queries** – this method tries to determine what is meant by a user's search query. For example, some search engines (e.g., Ask Jeeves) allow you to execute a query by phrasing it as a question. Ideally, a concept-based search returns information relevant to the query, even if the content does not match the exact words used.

- **Search Operators** – these are instructions (usually simple words or symbols) that specify how a search will be conducted. Frequently used search operators, called Boolean operators, are the words AND, OR and NOT. These words, which must be capitalized, connect search keywords and phrases in a query statement. Using Boolean operators can help users narrow their searches by specifically excluding or including information while searching. The results of a search may be searched again, or "refined" using Boolean operators to narrow the focus of the search and produce a manageable number of high-quality matches.

The Internet is an excellent source of information on any subject. It is also a source of a variety of free services useful to business, such as e-mail and software. However, it is important to remember that information gathered on the Internet is not necessarily the highest quality information, and that free services are not always the simplest or most effective solution to a business problem. Users will be well served by taking the time to develop their Internet browsing and searching skills, as well as keeping an analytical eye on the vast quantity of Internet-based information available to any user, anywhere at any time.

Chapter Three – Making the Transition

From Business to Electronic Business

Many thousands of business enterprises have entered the world of electronic business (eCommerce or eBusiness) to varying degrees. This can mean anything from creating a simple Web site to displaying product information in an electronic catalog to establishing a complex and sophisticated electronic network with customers and suppliers, including online shopping and payment processing. Easy, interactive access to real-time data via the Internet has opened new possibilities for businesses. The Internet allows the smallest of businesses to compete with the giants of industry. However, the success of any organization that plans to incorporate eBusiness technologies into its existing business will be determined by its overall business model, its short and long-term goals and how it chooses to make the transition

Rethink the Business and Make a Plan

For existing businesses, a crucial first step is the development of a plan to integrate Internet-based technologies into business practices. This plan may become an updated version of the original business plan, especially if the overall business model is examined and modified to accommodate eBusiness technologies. The plan may start out with only a small-scale venture into the world of eBusiness, for now. In any case, specific business goals and objectives must be reviewed and adjusted if necessary, and a determination made regarding which electronic technologies will help you achieve them. A means for assessing the performance of changes should be devised. This information will guide the decision of whether to develop a Web site and point out the need for other information processing/exchange capabilities (e.g., EDI, payment processing, etc.).

A good transition plan will consider and address issues such as the following:

1. How do we foresee incorporating Internet-based technologies into the way we do (want to do) business?

2. What specific goals do we have for new business conducted online, as well as business overall?

3. Do we want to use the Internet simply as an economical way to transmit data?

4. Do we hope to boost market share and sales revenues?

5. Do we want to enter an entirely new market and/or establish a new distribution channel?

6. How much will it all cost? What equipment do we need?

7. How will we phase in new systems, technologies, and processes?

Every business will need to determine how it wants to use the power of the Internet, the Web, and eBusiness tools to meet its business goals. Simply incorporating some new eBusiness tools will not make a business more efficient and profitable. Solid and workable business models and strategies must first be in place. The integration of properly tailored eBusiness technologies will help a good business work better.

Chapter Four – Building a Website

If, after examining your business goals, you determine that an online presence will help you achieve them, the next issue is building an effective eBusiness site. Once the products and services to be offered to online customers are identified, an important issue to tackle is how to build the perfect online selling machine. There are numerous resources available on the Internet – free tips such as the Ecommerce Guide Site Builder, as well as sellers of web development services, analysis, tools and technologies.

Development Options for E-Business Sites

Not so long ago, when retailers first started conducting business online, they were not well integrated electronically with key entities such as banks, suppliers, warehouses, shippers, etc. and as a result, costs were high and customer service was less than adequate. However, with today's more evolved eBusiness technologies, the integration of all these elements is much more efficient and cost-effective. There are a number of options available for becoming an online merchant, including low-cost "instant storefront" software packages and online "small business" sites that offer step-by-step guidance.

The "Instant" Approach

Many "portal" sites allow a small business to set up an online storefront in a matter of minutes, including the capability to process credit card payments and manage orders. Secure credit card transactions and advanced shopping cart features are some of the options available with eBusiness solution providers. Shopping cart technology allows a shopper to keep track of selections and purchases while he browses. It also allows the website to suggest related items to the customer with messages such as "people who bought that also bought this…".

Customized Approaches

While the instant storefront options discussed above may be suitable for many small or home-based businesses with little technological expertise, other companies may prefer to conduct their own eBusiness affairs. A variety of tools, techniques, and equipment is available for designing, building, marketing, and maintaining a retail website. Three general approaches are discussed below:

- **ISP Hosted** – Merchant Develops Website
  Numerous software packages are available that can help a business develop its own eBusiness website. These packages may include "canned" templates and features, but some degree of skill is required. A business may have the in-house expertise to develop a customized website or may hire a consultant for this task. In either case, the website developed by the company is hosted by an outside ISP. The company may then retain responsibility for updating and maintaining the website, or it may outsource this responsibility to the ISP or third party.

- **In-house Hosting**
  If a business expects to conduct a significant volume of Web-based business, it will need a high degree of customization and flexibility built into its website and eBusiness processes. In this case, it may be appropriate to purchase or lease a total hardware and software solution, including a significant amount of professional assistance. The business will be operating its own server, database, and online payment system.

- **Starting from Scratch**
  If a business' eBusiness functions and processes are expected to be unique and complex, it may need to start at square one and have a system built from the ground up. This includes custom-designed hardware and software, marketing, electronic connections to supplier and distributor networks, training of company staff, periodic re-designs and overhauls, and routine maintenance. A major information technology (IT) firm specializing in total eBusiness solutions will likely be needed.

Attracting Visitors to the Web Site

Three essential elements of retail sales are product, market, and location (or at least good directions). This is just as true on the Internet. Customers need to know where and how to find the site, or can easily stumble across it when browsing for something similar. Search engines are unable to index every one of the thousands of new Web sites created every day. Consequently, savvy entrepreneurs have developed "Web positioning" services to increase the odds that a new Web site will be highly ranked in a search engine's database.

Marketing is a critical function. A new website must be aggressively marketed, both online and in more traditional ways. It is important to actively promote the fact that a business has a website. Every letter, fax, pencil, pen, business card, invoice, brochure and purchase order should advertise the business' website.

Keep ‘em Coming Back

It is important to remember that a website’s work is never done. One of the most serious mistakes a company can make, next to having a “build it and they will come” mentality, is to assume that once a retail website has been created, it can be left alone until updates are needed to the retail catalog. It is well documented that a customer base, even a loyal one, expects to see new, value-added features and interactive opportunities on a regular basis. A website that is not dynamic makes the company seem stale. When a website is refreshed and updated often, customers and visitors sense that someone is “home” and are far more likely to return to the site.

Another word of caution – be careful of trying to do too much too soon. Some businesses regret jumping in with a product or website that’s not quite ready, since it’s hard to recover from a botched launch, especially one that compromises customer service. Other companies regret launching too late trying to get every detail resolved, which lost them the opportunity for early brand recognition as well as sales. The sensible plan is to launch an eBusiness initiative when a solid core of well-planned features and functions is operational. The marketplace will dictate the rest.

Chapter Five – How to Sell to the Government

Now that you know how to browse and conduct searches on the Internet and set up a great website, you need to know how to find business opportunities with the government. The Federal government has legal requirements for "fair and open competition", as well as procedural guidelines for how government buyers may make purchases. If you want to sell to the government, you need to search out bidding opportunities and make sure you are in compliance with all the requirements.

Central Contractor Registration

By the fall of 2003, a company MUST be registered in the Central Contractor Registration (CCR) to do business with the Federal government. CCR is the central repository of information about companies that want to do business with, and receive payment from any agency of the Federal Government. Vendor payments for all government agencies will be made on the basis of the EFT data contained in CCR. Prospective contractors must be registered in the CCR database in order to receive contract awards or invoice payments. Contractors are required to register one time and check their information annually. Companies can register and update their registration profiles online by visiting the CCR Home Page at www.ccr.gov.

As part of the registration process, a business must clearly identify the products and/or services it wishes to sell. Because government agencies may differ in their procurement methods and descriptions of the goods being solicited, two primary coding systems are used to identify specific business types and products/services offered.

The first of these is the 4-digit Standard Industrial Classification or SIC Code. SIC codes were developed by the US government to allow statistical comparison between different types of businesses as a way to measure economic growth. SIC codes sometimes make a close distinction between the things a business does; therefore, companies must be careful when using and searching for them. To find SIC codes that apply to your business, visit the Occupational Safety & Health Administration (OSHA) Standard Industrial Classification Search Web page at http://www.osha.gov/oshstats/sicser.html.

In 1997 the Office of Management and Budget (OMB) announced its decision to adopt a new industrial classification system called the North American Industrial Classification System (NAICS). NAICS codes are intended to replace SIC codes. More information about NAICS codes is available at the Web page of the US census at www.census.gov/naics.

The second important identifier is the four-digit Federal Supply Code (FSC). This term generally encompasses both Federal Supply Codes which identify specific products, and Product Service Codes, which identify services. A listing is available at www.dlis.dla.mil/h2/.

Contracting Rules

Federal Contracting Regulations

All Federal government agencies follow the basic contracting rules set forth in the Federal Acquisition Regulation (FAR) (www.arnet.gov/far/). DoD has additional rules set forth in the DoD FAR Supplement (DFARS) (http://deskbook.dau.mil/).

DoD Acquisition Methods

Purchases made by DoD can generally be categorized by the dollar amounts associated with them or by procurement technique and the rules that each has to follow.

Micropurchases
A micropurchase is a transaction valued under $2500. A business does not need to be registered in the Central Contractor Registration to sell a micropurchase to a government buyer. Payment for these transactions must be by government purchase card, so a business needs the ability to process credit card transactions.

Simplified Acquisition Procedures
These are streamlined techniques and guiding principles designed to reduce the administrative burden of awarding the lower dollar value procurements that account for the vast majority of DoD acquisitions. Nearly 98 percent of DoD's purchase transactions are for $100,000 or less. They comprise less than 20% of DoD's procurement spending, but they total in the billions of dollars annually. Most of these millions of actions are done using simplified small purchase procedures. To become more familiar with Simplified Acquisition Procedures, visit http://www.acq-ref.navy.mil/topic.cfm?topic_id=18.

Purchases over $25,000 are posted on the FedBizOpps.gov website (see below).

Reverse Auctions
A reverse auction is, as the name implies, the opposite of a typical auction. In a reverse auction, the buyer describes the goods, quantity, etc. he wishes to buy and sets a maximum price he is willing to pay. Thus, the buyer begins the auction by establishing the highest acceptable price and sellers then bid the price down. Two DoD activities offer reverse auction services: US Army CECOM at http://abop.monmouth.army.mil (requires vendor registration) and the Naval

Supply Systems Command (http://www.auctions.navy.mil/). Actual auctions will be publicized by the ordering agency prior to the time of the auction. Using Reverse Auctions does not change the requirements in the acquisition process; synopsis and solicitation procedures must be followed as they would for any other government procurement. The FedBizOpps site has a link under "Related Links" on the right side of the screen for a listing of federal contract opportunities.

Small Business Set-asides
All federal agencies are required to establish goals for awarding contracts to small businesses. These goals are negotiated with the Small Business Administration annually. To meet these goals, agencies use a variety of small business preference programs, including Small Business Set-asides. Visit the Small Business Administration website (www.sba.gov) for information on programs to assist small businesses.

Subcontracting Opportunities

Quite often, large Federal contracts contain provisions requiring the prime contractor to subcontract certain specified percentages to small, minority-owned, woman-owned, 8A, and veteran-owned companies. Small businesses can use the Department of Defense Subcontracting Directory (http://www.acq.osd.mil/sadbu/publications/subdir/index.html). This document lists prime contractors by state holding contracts valued at $500,000 or greater ($1 million for construction contracts). Also listed are the prime contractor's small business liaison officer and the product or service the company provides.

Prime contractors can use the SBA's SUB-Net to post subcontracting opportunities. Small businesses can peruse this site to identify opportunities in their areas of expertise. An alphabetical list of prime contractors is available by state, with contact information for their small business representatives. It is also possible to search the SUB-Net site for subcontracting opportunities by SIC code, NAICS code, key words or solicitation numbers obtained from other sources. The site is located at web.sba.gov/subnet.

Government Procurement Web Sites

FedBizOpps

FedBizOpps (http://www.FedBizOpps.gov) is the single government point of entry for Federal government procurement opportunities over $25,000. Contractors looking for Federal markets for their products and services can search, monitor and retrieve opportunities from the entire Federal contracting community. FedBizOpps is also a good source of information and links to many useful sites, such as EPS Vendor Registration, where companies may sign up to receive procurement announcements from FedBizOpps. That site is

http://www.fedbizopps.gov/EPSVendorRegistration.html. Commercial services are available that will help you find solicitations for a fee. These services include Value Added Networks and bid opportunity search engines.

When responding to solicitations, pay careful attention to the requirements for how to bid on the solicitation. Some agencies have the capability to receive electronic quotes and bids; others do not. Some buying activities require a contractor to register at their website in order to respond electronically. For example, it is necessary for a contractor to register in CCR and at the Army's website, Army Single Face to Industry, to bid on a solicitation posted by an Army buying activity. The Defense Logistics Agency requires registration to respond electronically to their solicitations. The contractor is then prompted to complete an electronic form. Be sure to visit the websites of the buying activities that interest you and familiarize yourself with their procedures.

General Services Administration

The General Services Administration (GSA) purchases goods and services for the Federal Government, civilian Agencies, the military, the Federal Courts, and the US Congress. For more information on business opportunities with GSA, visit the GSA website at http://www.gsa.gov. Contractors interested in getting on the GSA Schedule can find more information at www.fss.gsa.gov/goschedule.

Buyers.gov is an innovative solution being implemented by GSA's Federal Technology Service (FTS). It is an electronic commerce auction and volume purchasing capability for IT commodities for Federal agencies. FTS is using existing, commercially available solutions to aggregate requirements from multiple government customers and leverage its buying power to reduce cost and acquisition time for Federal agencies. More information is available at http://buyers.gov and http://buy.gov. In addition, private auction services for specific agency procurements are also available from Buyers.gov. GSA has awarded Reverse Auction Enabler Service Contracts to contractors who will conduct auctions on behalf of the ordering government agency.

Chapter Six - Doing Business Securely

The Internet was established on a suite of protocols called TCP/IP (Transmission Control Protocol/Internet Protocol). The early users of the Internet were a closed community with little need for security – until the first attack. Today, any business considering connecting its network to the Internet must face the issue of protecting information in transit and also information residing on its network. There are numerous tools a business can use to protect itself. Two commonly used security measures are firewalls to protect networks and encryption to protect data being transmitted.

Firewalls

A firewall is a system designed to restrict or prevent access to a private network. Firewalls are often used to protect a private network connected to the Internet from access by unauthorized Internet users. Firewall technology continues to evolve as use of the Internet continues to expand and users continue to demand new features. For more information on firewalls, go to http://www.firewall.com/.

Encryption

Encryption encodes or "scrambles" electronic communications and information to protect them from being disclosed or changed. Here are a few of the tools being used when encryption is necessary.

Public Key Infrastructure (PKI)

PKI uses data cryptography and electronic digital signature to protect the transmission of electronic data over an insecure network such as the Internet or within an organization to protect sensitive information. Encryption provides privacy and digital signature authenticates the sender of the message and ensures the integrity of the message.

PKI is based on asymmetric encryption which is a public/private key pair that is mathematically related. One key encrypts the data; the other decrypts it. The public key can be freely disseminated, but the private key is kept secret because it validates the identity of the user. One key cannot be calculated from the other.

A trusted third party is needed to vouch for the identity of individuals requesting digital certificates (digital IDs) as well as their relationship with the public key (e.g. their organization). A Certificate Authority (CA) is a trusted party who issues digital certificates that validate the identity of persons and their organizations. The digital certificates are then used to digitally sign electronic messages.

Public key infrastructure provides the following benefits:

- **Authentication** Digital certificates issued as part of PKI validate the identity of the sender.

- **Data Integrity** A digital certificate ensures that the message or document the certificate "signs" has not been altered or corrupted in transit.

- **Privacy assurance**. Digital certificates protect information from interception during Internet transmission.

- **Nonrepudiation** the transaction "signed" with a digital signature cannot be easily repudiated; the sender cannot deny the sending or the contents of the transaction.

The Government Paperwork Elimination Act requires Federal agencies to accept electronic signatures, including digital signatures. Visit www.whitehouse.gov/omb/memoranda/m00-10.html to see the guidance provided to agencies for implementing this legislation. Using PKI is one way for the agencies to comply. GSA has established a program using PKI to support digital signature for government-wide use with the public. More information is available at http://www.estrategy.gov/aces_policy_authority.cfm.

DoD PKI is extremely important and is an integral component in achieving the strategy outlined in the Defense Reform Initiative – "Data security (through encryption) and information assurance (building on key management) are indispensable components in the future of Defense Department computer systems." For more information, go to the website at http://iase.disa.mil/pki.

The Federal government has another initiative, e-Authentication, that will enhance access to and secure delivery of online government information and services for citizens, businesses and state and local governments. Check it out at http://www.cio.gov/eauthentication/news.htm.

Secure Sockets Layer (SSL)

Secure Sockets Layer (SSL) is a protocol developed by Netscape which encrypts data being transferred over the Internet. SSL creates a secure connection between a client and the host web server. Each side of the connection has a Security Certificate which it sends to the other. The data is then encrypted and sent, using information from both certificates, thus providing message privacy, authentication, and message integrity. URLs that begin with "https" indicate that an SSL connection will be used.

Chapter Seven – Getting Paid

The Defense Finance and Accounting Service (DFAS) is responsible for paying invoices submitted against DoD contracts. All DFAS payment offices are using the Electronic Funds Transfer (EFT) data provided in the CCR to issue EFT payments. When a company registers in the CCR, it is automatically enrolled in EFT.

Web Invoicing System

DFAS has implemented a Web Invoicing System (WinS) that enables contractors to send invoices electronically with little or no cost. Contractors enter their invoices into templates on a DFAS-owned Web server that processes and routes the invoices to the appropriate payment system. More information on WinS may be found at http://www.dfas.mil/ecedi.

Wide Area WorkFlow Receipts and Acceptance

Wide Area WorkFlow – Receipts and Acceptance (WAWF-RA) is a paperless contracting DoD-wide application designed to eliminate paper from the receipts and acceptance process of the DoD contracting lifecycle. The goal is to enable authorized Defense contractors and DoD personnel to create invoices and receiving reports, and to access contract-related documents.

In the traditional DoD business method, three documents are required to make a payment: the contract, the receiving report, and the invoice. Each of these may arrive at the payment office separately – if they are paper. They are processed individually as they arrive. Information is then manually keyed in to the payment system. Using WAWF-RA, electronic documents are shared, eliminating paper and redundant data entry. Data accuracy is increased and the risk of losing a document is greatly reduced.

The contract is available through a seamless interface with an application called Electronic Document Access (EDA). Contractors have electronic options for submitting invoices and receiving documents.

Authorized DoD personnel receive notification electronically of pending actions and have a virtual folder of documents accessible. Digital signatures are used to authenticate the users and to digitally sign documents. In some cases, user ID and password can be used in lieu of a digital signature. Visit the WAWF-RA website for additional information: https://rmb.ogden.disa.mil. Web-based training is also available at http://www.wawftraining.com.

Other benefits of WAWF-RA include:

- Elimination of paper-based support functions. With the electronic capture, storage, and retrieval of required documents, the supporting infrastructure, which includes mail, file and copy room, and associated personnel, no longer needs to be maintained, thus reducing operating costs.

- Global accessibility. Multiple users are able to globally access documents, which streamlines processing, reduces the need for re-keying, improves accuracy, and provides real-time processing and access to document status. Users are able to search discrepancies, history, or status related to past payment, shipment, or invoices, without having to involve individuals from other organizations. DoD contractors are able to submit their invoices electronically and to access contract payment records and status.

- Accuracy of documents. Problems such as unmatched disbursement, duplicate payment, and payment delay are alleviated.

- Secure and auditable transactions. Access to appropriate functions and documents is controlled through the user registration process. In addition, Public Key Infrastructure (PKI) certificates are used to verify user identification.

Electronic Document Access

Electronic Document Access (EDA) acts as a virtual file cabinet for the storage and retrieval of contract documents used by multiple DoD activities.
EDA replaces the paper process by providing a single, read-only, "electronic file cabinet" that can be accessed by any authorized user, both within DoD and in the vendor community. Vendors may be authorized to view only contract documents that match their validated DUNS or CAGE codes.

At the present time, the system provides storage and retrieval of post-award contracts, contract modifications, personal property and freight Government Bills of Lading (GBLs), vouchers, Contract Deficiency Reports (1716s), Summaries of Voucher Line Data (110 Reports), Materiel Acceptance and Accounts Payable Reports (MAAPRS), and Army direct vendor deliveries (DVDs) in a compressed test format running on DoD's private network. EDA provides payment technicians at the DFAS, DoD contract officers, procurement officers, and transportation technicians with the ability to view and process documents without paper copies. Vendors have view-only capability of their contract documents only. Additional information is available at the EDA website: http://eda.ogden.disa.mil.

DFAS Vendor Pay Inquiry System

The Vendor Pay Inquiry System (VPIS) is an application available to contractors doing business with the Department of Defense. This is an interactive system that provides information on invoices submitted against DoD contracts that DFAS is responsible for paying. More information is available at http://www.dfas.mil/money/vendor/vphelp.htm.

Chapter Eight - Other Resources

Every Federal agency has an Office of Small and Disadvantaged Business Utilization with personnel to assist small businesses. The information below is only a sampling of the type of help that is available to businesses wishing to do business with the Department of Defense and other Federal agencies.

Department of Defense

Small and Disadvantaged Business Utilization Office (SADBU)

The DoD SADBU office is a good source of information on Federal government contracting as well as information of specific interest to small businesses. Visit the DoD SADBU website at http://www.acq.osd.mil/sadbu. A DoD publication for "Selling to the Military" is available at http://www.acq.osd.mil/sadbu/publications/selling/.

Each DoD buying activity has a small business specialist who can provide assistance on how to market to DoD as well as information on what goods are being solicited. A listing is available at http://www.acq.osd.mil/sadbu/sbs.html.

Procurement Technical Assistance Centers

The Defense Logistics Agency administers the Procurement Technical Assistance Cooperative (PTAC) Agreement Program under which PTACs provide assistance to businesses seeking contracting opportunities. PTACs provide detailed information on how to obtain and perform contracts with Federal, State and local governments. A list of PTACs and the regions they serve may be found at http://www.dla.mil/db/procurem.htm.

DoD Mentor-Protégé Program

This program seeks to encourage DoD prime contractors (mentors) to develop the technical and business capabilities of small disadvantaged businesses and other eligible protégés. The program offers mentors credit toward their contractual subcontracting goals and some direct reimbursement of costs in exchange for helping protégés to compete more successfully for DoD prime contracts and subcontract awards. More information is available at http://www.acq.osd.mil/sadbu/mentor_protégé/

Small Business Administration

The Small Business Administration offers numerous programs and services to help small businesses. Several of these are mentioned below, but you are strongly encouraged to visit the SBA home page at http://www.sba.gov/ to see the full range of resources available to small businesses. The Office of Government Contracting advocates on behalf of small business in the federal procurement arena. This office works to create an environment for maximum participation by small, disadvantaged, and woman-owned businesses in federal government contract awards and large prime subcontract awards.

SBA Exchange

The Small Business Administration has a relatively new online purchasing tool that helps small businesses set up an electronic storefront and do business online. The site allows government agencies to award acquisitions of up to $100,000 to small businesses and make payments electronically using government purchase cards. Visit the site at http://www.sbaexchange.com

Business Matchmaking

The Business Matchmaking Program is sponsored by the Small Business Administration, the US Chamber of Commerce and HP. It is an event designed to match small business owners with contract procurement officers from federal, state and local government agencies, and private companies to award procurement contracts. Visit the website at http://www.uschamber.com/events/matchmaking/ for information on upcoming events.

Small Business Development Centers (SBDCs)

Small Business Development Centers are another service offered by the Small Business Administration. These centers offer one-stop assistance to small businesses by providing a wide variety of information and guidance, counseling, training and technical assistance in all aspects of small business management. For a directory of SBDCs, see http://www.sba.gov/sbdc.

Small Business Innovation Research Program (SBIR)

SBIR is a very competitive program that encourages small business to explore their technological potential and provides the incentive to profit from its commercialization. By reserving a specific percentage of federal Research and Development (R&D) funds for small business, SBIR enables small business to compete on the same level as larger businesses. Since its enactment in 1982, SBIR has helped thousands of small businesses to compete for federal research

and development awards. Each year, ten federal departments and agencies are required by SBIR to reserve a portion of their R&D funds for award to small business. These agencies designate R&D topics and accept proposals. More information is available at http://www.sba.gov/sbir.

Small Business Technology Transfer Program (STTR)

STTR is a small business program that expands funding opportunities in the federal innovation research and development arena to include joint venture opportunities for small business and nonprofit research institution partners. STTR combines the strengths of small business entrepreneurial skills with the high tech research efforts of nonprofit research laboratories to bring scientific and technological innovation to the marketplace. Five federal departments and agencies participate in the STTR system. For additional information, visit http://www.sba.gov/sbir/indexsbir-sttr.html

PRO-Net

SBA manages PRO-Net (http://pro-net.sba.gov/index2.html), which is an electronic gateway of procurement information for and about small businesses. It is a search engine for use by government contracting officers which provides them with open access to a database of information on small, disadvantaged, 8(a), and minority-owned businesses. It is designed to be a marketing tool for small firms, providing them the opportunity to post a marketing profile including links to home pages and electronic catalogs. DoD is partnering with SBA to integrate PRO-Net and CCR, streamlining the process for firms to automatically register in both databases at the same time.

Department of Commerce (DOC)

The Department of Commerce sponsors the Minority Business Development Agency (www.mbda.gov) which provides comprehensive business assistance to minority owned small businesses. It is committed to empowering minority business enterprises.

Another DOC resource is the NIST (National Institute of Standards and Technology) Small Business Corner (http://csrc.nist.gov/SBC) which is part of the Computer Security Division. It was developed to give small business owners greater access to NIST guidelines and other security related materials. NIST offers workshops for small businesses to promote IT security awareness.

The Manufacturing Extension Partnership (MEP) is a nationwide network of not-for-profit centers in over 400 locations nationwide, whose sole purpose is to provide small and medium-sized manufacturers with the help they need to

succeed. The centers are linked together through NIST. For more information on MEPs, go to http://www.mep.nist.gov/.

General Services Administration (GSA)

GSA's Office of Small Business Utilization is GSA's advocate for small, minority and women business owners. Business activities are supported by program experts at GSA Headquarters and at Small Business Utilization Centers in 11 regional offices; the GSA Federal Technology Service; and the GSA Public Building Service. GSA's outreach activities include procurement conferences, workshops and networking sessions.

GSA operates and maintains the Federal Procurement Data System, a central repository of statistical information on Federal contracting. It contains detailed information on contract actions over $25,000 and summary data on procurements of less than $25,000. Visit the site at http://www.fpdc.gov/.

Additional Web Resources

E-commerce Webopedia	http://e-comm.webopedia.com	Source for up-to-date electronic commerce terms and definitions
Office of Electronic Government and Technology	http://estrategy.gov	Information about on-line government services and information
Firstgov	www.firstgov.gov	US Government's official web portal
Dept. of Commerce	www.fedworld.gov	Index of online government resources
Federal Information Center	http://fic.info.gov	
"Selling to the Federal Government"	www.sba.gov/womeninbusiness/selling.html	Useful information for women in business interested in selling to the Federal Government
	www.womenbiz.gov	Gateway for women business owners interested in selling to the Federal Government
Air Force Small Business Online	www.selltoairforce.org	
Air Force Mall	http://www.miairforcemall.org	
Air Force Outreach Program Office	www.airforceoutreach.org	
Navy SADBU Office	www.hq.navy.mil/sadbu	
	http://www.businesslaw.gov	Legal and regulatory information for small business
Army Single Face to Industry	http://acquisition.army.mil	
DoD Procurement Gateway	http://progate.daps.dla.mil/home/	